

CLAIMS

1. A burglar alarm and door chime comprising:
  - a. a back plate fastened to the inside of a door and cooperating with electric circuit logic means for the cooperating with an "instant lock-alarm" mode electric switching means, and "chime"/"delay alarm" modes electric switching means, and non-contacting sensing means cooperating with said "chime"/"delay alarm" modes electric switching means, audible alarm and chime means cooperating with electric power supply means, and "On" and "Off" power electric switch means, and
  - b. a front cover containing manual arming spring-biased "instant lock-alarm" slide means cooperating with said "instant lock-alarm" mode electric switching means of said burglar alarm and door chime when said front cover is fastened to said back plate, and
  - c. a jamb plate fastened to a door jamb cooperating with said manual arming spring-biased "instant lock-alarm" slide means of said front cover during the opening of said door to effect the "instant lock-alarm" mode of said burglar alarm and door chime, and
  - d. said non-contacting sensing means consisting of a transmitting means attached to said jamb plate and a receiving means attached to said back plate, said receiving means responsive to said transmitting means to automatically activate and deactivate said "chime"/"delay alarm"

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modes electric switching means responsive to the opening and closing of said door to effect the selected mode of said burglar alarm and door chime (i.e. "chime" or "delay alarm" mode).

2. The burglar alarm and door chime of claim 1 wherein:

a. said spring-biased "instant lock-alarm" slide means cooperates with said "instant lock-alarm" switch means to effect an instant audible alarm having electric circuit latching means and also functions as a mechanical dead bolt lock in cooperation with said jamb plate, and

b. said "chime"/"delay alarm" modes electric switching means of said burglar alarm and door chime comprise manual selection mode switching means whereby "chime" or "delay alarm" operational modes may be manually selected for said burglar alarm and door chime, and

c. said audible alarm and chime means comprises a speaker, said "On" and "Off" power electric switch means comprising a plurality of accessible manually operated electric switching means in series with electric power supply means to manually activate or deactivate said burglar alarm and door chime and said electric power supply means comprises a battery.

3. The burglar alarm and door chime of claim 2 wherein:

a. said lock-alarm slide means comprises a slide having "armed", "instant lock-alarm", and "unarmed" slide positions slidably attached to said front cover, said slide being spring-biased to move through slots in said front cover to manually engage said jamb plate for the "armed" slide position, said jamb plate containing an aperture to automatically capture said slide during the opening of said door to effect the "instant lock-alarm" slide position, said slide having stop means engaging said front cover to effect the "unarmed" slide position, and

b. said transmitting means consisting of a permanent magnet attached to said jamb plate and cooperating with said receiving means attached to said back plate and consisting of a magnetically actuated switch responsive to said permanent magnet during the opening and closing of said door, said magnetically actuated switch cooperating with said "chime"/"delay alarm" modes electric switching means and said manual selection mode switching means to effect a "pre-arm" condition of said "delay alarm" operational mode of said "chime"/"delay alarm" modes electrical switching means during the opening of said door to activate said magnetically actuated switch and effect an "armed" condition of said "delay alarm" operational mode during the closing of said door, and causing a pre-set entry delay time means of said electric circuit logic means to cause said "delay alarm" operational mode of said "chime"/"delay alarm" electric switching means to be

responsive to the opening of said door to activate said audible alarm means after a pre-determined delay time, or (if the "chime" mode of said manual selection mode switching means has been selected) to effect said "chime" operational mode during the opening of said door.

4. The burglar alarm and door chime of claim 3 wherein:

- a. said electric circuit logic means includes variable time delay means for said "delay alarm" operational mode, and
- b. light flashing means responsive to said "armed" slide position, said "instant lock-alarm" slide position and said "delay alarm" operational mode, and
- c. said "On" and "Off" power electric switch means cooperating with additional electric switching means whereby the combination of said "On" and "Off" power electric switching means required to deactivate said burglar alarm and door chime can be altered.

5. The burglar alarm and door chime of claim 1 further including a smoke detection sensing unit fastened to said burglar alarm and door chime.

6. The burglar alarm and door chime of claim 5 wherein:

a. said smoke detection sensing unit comprises visual and manual functional testing means attached to said burglar alarm and door chime, and

b. includes an independent power supply means.

7. A burglar alarm and door chime comprising:

a. a back plate fastened to a front cover forming a hollow enclosure therewith, said back plate fastened to a door on the protected enclosure side of said door, said back plate having upper and lower and side surfaces to locate and fasten said front cover to said back plate, and

b. said front cover containing manual arming spring-biased "instant lock-alarm" slide means, a bifurcated leaf spring attached to said spring-biased "instant lock-alarm" slide means and electrically insulated therefrom, said bifurcated leaf spring cooperating with "instant lock-alarm" mode electric switching means fastened to a printed circuit board, said printed circuit board fastened to said back plate, and said "instant lock-alarm" mode electric switching means cooperating with electric circuit logic means of said printed circuit board, and

c. non-contact sensing means cooperating with "chime"/"delay alarm" modes electric switching means of said electric circuit logic means of said printed circuit board, and said non-contacting sensing means consisting of a transmitting means attached to a jamb plate, and a receiving means attached to said printed circuit board of said back plate, said receiving means responsive to said transmitting means to automatically activate and deactivate said "chime"/"delay alarm" modes electric switching means responsive to the opening and closing of said door to effect the selected mode of said burglar alarm and door chime (i.e. "chime" or "delay alarm" mode), and

d. said transmitting means consisting of a permanent magnet and said receiving means consisting of a magnetically actuated switch, and

e. said jamb plate having an opening therethrough and fastened to a door jamb and cooperating with said manual arming spring-biased "instant lock-alarm" slide means of said front cover during the opening of said door to effect the "instant lock-alarm" mode of said burglar alarm and door chime, and

f. said printed circuit board containing audible alarm and chime means and cooperating with "On" and "Off" power electric switching means cooperating with electric circuit logic means to activate or deactivate said burglar alarm and door chime in combination with electric power supply means.

8. The burglar alarm and door chime of claim 7 wherein:

a. said spring-biased "instant lock-alarm" slide means cooperates with said "instant lock-alarm" switch means to effect an instant audible alarm having electric circuit latching means and also functions as a mechanical dead bolt lock, in cooperation with said jamb plate, and

b. said "chime"/"delay alarm" modes electric switching means of said burglar alarm and door chime comprise manual selection mode switching means whereby "chime" or "delay alarm" operational modes may be manually selected for said burglar alarm and door chime, and

c. said audible alarm and chime means comprises a speaker, said "On" and "Off" power electric switch means comprises a plurality of accessible manually operated electric switching means in series with said electric power supply means to manually activate or deactivate said burglar alarm and door chime and said electric power supply means comprises a battery.

9. The burglar alarm and door chime of claim 8 wherein:

a. said lock-alarm slide means comprises a slide having "armed", "instant lock-alarm", and "unarmed" slide positions slidably attached to said front cover, said slide being spring-biased to move through

slots in said front cover to manually engage said jamb plate for the "armed" slide position, said jamb plate containing an aperture to automatically capture said slide during the opening of said door to effect the "instant lock-alarm" slide position, said slide having stop means engaging said front cover to effect the "unarmed" slide position, and

b. said permanent magnet attached to said jamb plate being a rare earth permanent magnet and said magnetically actuated switch being a magnetically responsive reed switch, said rare earth permanent magnet and said magnetically responsive reed switch cooperating with said manual selection mode switching means to effect a pre-arm condition of said "delay alarm" operational mode of said "chime"/"delay alarm" modes electrical switching means during the opening of said door and cause said magnetically responsive reed switch to effect the "armed" condition of said "delay alarm" operational mode during the closing of said door and causing a pre-set entry delay time means of said electric circuit logic means to cause said "delay alarm" operational mode of said "chime"/"delay alarm" electric switching means to be responsive to the opening of said door to activate said audible alarm means after a pre-determined delay time, or (if the "chime" mode of said manual selection mode switching means has been selected) to effect said "chime" operational mode during the opening of said door



10. The burglar alarm and door chime of claim 9 wherein:

a. said electric circuit logic includes variable time delay means for said "delay alarm" operational mode, and light flashing means responsive to said "armed" slide position, said "instant lock-alarm" slide position and said "delay alarm" operational mode, and said "On" and "Off" power electric switch means cooperating with additional electric switching means whereby the combinations of said "On" and "Off" power electric switching means required to deactivate said burglar alarm and door chime can be altered.

11. The burglar alarm and door chime of claim 7 further including a smoke detection sensing unit fastened to said burglar alarm and door chime.

12. The burglar alarm and door chime of claim 11 wherein said smoke detection sensing unit comprises visual and manual functional testing means attached to said burglar alarm and door chime and includes an independent power supply means.

13. A burglar alarm and door chime comprising:

a. an electrical subassembly mounted to a circuit board and containing electric circuit logic means, and electric power supply means, said electric circuit logic means comprising "instant lock-alarm" and "chime"/"delay alarm" modes electric switching means, said electrical subassembly mounted to said circuit board comprising a self-contained operational electrical subassembly unit detachably secured to a back plate, said back plate fastened to a door, and

b. a mechanical subassembly comprising a front cover and said front cover comprising mechanical manual arming spring-biased "instant lock-alarm" actuation means, spring biased switching means attached to said manual arming spring-biased "instant lock-alarm" actuation means and cooperating with said circuit board detachably secured to said back plate to effect said "instant lock-alarm" mode of said burglar alarm and door chime during the opening of said door, and

c. non-contacting sensing means cooperating with "chime"/"delay alarm" modes electric switching means of said circuit board logic means, and said non-contacting sensing means comprising switch actuation means attached to said circuit board responsive to transmission media means attached to a jamb plate further attached to a door jamb to effect the "chime"/"delay alarm" modes electric switching means during the opening and closing of said door, and

- d. manually operated mode selection switching means attached to said circuit board of said self-contained operational electrical subassembly unit to manually effect the mode of choice for said "chime"/"delay alarm" modes electric switching means for said burglar alarm and door chime, and
- e. said manual arming spring-biased "instant lock-alarm" actuation means cooperating with said jamb plate attached to said door jamb to simultaneously provide for a mechanical dead-bolt locking mode, and
- f. an audible alarm means responsive to said manual arming spring-biased "instant lock-alarm" actuation means and said "chime"/"delay alarm" modes electric switching means, said audible alarm means cooperating with said electric power supply means to sound an alarm upon the opening of said door, and
- g. "On" and "Off" power electric switch means cooperating with said electric power supply means to activate or deactivate said burglar alarm and door chime, and said "On" and "Off" power electric switch means cooperating with a additional switch means whereby the combination of said "On" and "Off" power electric switch means required to deactivate said burglar alarm and door chime can be altered, and said "delay alarm" means having variable time delay means cooperating with said electric circuit logic means.

14. The burglar alarm and door chime of claim 13 wherein said electric circuit logic includes light flashing means responsive to "armed" and "dead-bolt lock" operational states of said manual arming spring-biased "instant lock-alarm" actuation means and said "delay alarm" operational state of said "chime"/"delay alarm" modes.

15. The burglar alarm and door chime of claim 13 further including a smoke detection sensing unit independently fastened to said back plate and including independent power supply means, said smoke detection sensing unit comprising visual and manual functional testing means attached to said front cover of said mechanical subassembly, to visually and manually operationally test said smoke detection sensing unit from said front cover.

16. A burglar alarm and door chime comprising:

a. a back plate fastened to the inside of a door having a front cover detachably secured to said back plate, said back plate and said front cover forming a hollow enclosure therein, said hollow enclosure containing electric circuit logic means cooperating with an "instant lock-alarm" mode electric switching means and "chime"/"delay alarm" modes electric switching means, said "chime"/"delay alarm" modes electric switching means accessibly secured to said hollow enclosure, audible alarm and chime means and electric power supply means, and

b. "On" and "Off" power electric switch means accessibly secured to said hollow enclosure and cooperating with said electric circuit logic means and said electric power means, and

c. a manual arming spring-biased slide means attached to said hollow enclosure and cooperating with said "instant lock-alarm" mode electric switching means of said electric circuit logic means, and

d. non-contacting sensing means consisting of transmitting means attached to a jamb plate and receiving means attached to said back plate of said hollow enclosure cooperating with said "chime"/"delay alarm" modes electric switching means of said electric circuit logic means to automatically effect said "chime"/"delay alarm" modes of said burglar alarm and door chime responsive to the manual selection of said "chime"/"delay alarm" modes electric switching means (i.e. "chime" or "delay alarm" mode) responsive to the opening and closing of said door.

17. The burglar alarm and door chime of claim 16 wherein:

a. said manual arming spring-biased slide means cooperating with said "instant lock-alarm" mode electric switch means to effect to effect an instant audible alarm having electric circuit latching means and also functions as a mechanical dead-bolt lock in cooperation with said jamb plate, and

b. said "chime"/"delay alarm" modes electric switching means comprise manual switching means accessibly secured to said front cover of said hollow

enclosure cooperating with said non-contact sensing means whereby "chime" or "delay alarm" operational modes may be manually selected, and

C. said audible alarm and chime means comprises a speaker, said "On" and "Off" power electric switch means comprises a plurality of accessible manually operated switching means in series with said electric power supply means to manually activate or deactivate said burglar alarm and door chime and said electric power supply means comprises a battery.

18. The burglar alarm and door chime of claim 17 wherein:

a. said lock-alarm slide means comprises a slide having "armed", "instant lock-alarm", and "unarmed" slide positions slidably attached to said front cover, said slide being spring-biased to move through slots in said front cover to manually engage said jamb plate for the "armed" slide position, said jamb plate containing an aperture to automatically capture said slide during the opening of said door to effect the "instant lock-alarm" slide position, said slide having stop means engaging said front cover to effect the "unarmed" slide position, and

b. said transmitting means and said receiving means of said non-contacting sensing means consisting of a permanent magnet (transmitting means) attached to said jamb plate and a magnetically actuated switch

(receiving means) attached to a printed circuit board attached to said back plate of said hollow enclosure, both cooperating with said "chime"/"delay alarm" modes electric switching means of said electric circuit logic means and cooperating with said manual selection mode switching means to effect a "pre-arm" condition of said "delay alarm" operational mode of said "chime"/"delay alarm" modes electrical switching means during the opening of said door and cause said magnetically actuated switch cooperating with said permanent magnet attached to said jamb plate to effect an "armed" condition of said "delay alarm" operational mode during the closing of said door, and causing a pre-set entry delay time means of said electric circuit logic means to cause said "delay alarm" operational mode of said "chime"/"delay alarm" electric switching means to be responsive to the opening of said door to activate said audible alarm means after a pre-determined delay time, or (if the "chime" mode of said manual selection mode switching means has been selected) to effect said "chime" operational mode during the opening of said door.

19. The burglar alarm and door chime of claim 18 wherein said electric circuit logic means includes variable time delay means for said "delay alarm" operational mode and light flashing means responsive to said "armed" slide position, said "instant lock-alarm" slide position and said "delay alarm" operational mode, said "On" and "Off" power electric switch means cooperating

with additional electric switching means whereby the combination of said "On" and "Off" power electric switching means required to deactivate said burglar alarm and door chime can be altered.

20. The burglar alarm and door chime of claim 16 further including a smoke detection sensing unit fastened within said hollow enclosure of said burglar alarm and door chime wherein said smoke detection sensing unit includes an independent power supply means and comprises visual and manual functional testing means cooperating with said smoke detection sensing unit.